

Power supply unit - STEP-PS/ 1AC/24DC/1.75 - 2868648

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Primary-switched STEP POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.75 A

Product description

STEP POWER power supplies for installation distributors

The STEP POWER power supply range was developed especially for building automation. The low idling losses and high degree of efficiency ensure maximum energy efficiency. They allow flexible use and can be snapped onto the DIN rail or screwed onto an even surface.

Why buy this product

- Flexible mounting by simply snapping onto the DIN rail or screwing onto a level surface
- Reliable power supply thanks to high MTBF (mean time between failures) of more than 500,000 hours and U/I characteristic curve
- Energy savings thanks to maximum energy efficiency and incredibly low idling losses



Key commercial data

Packing unit	1 pc
GTIN	4 046356 172844
Weight per Piece (excluding packing)	224.66 g
Custom tariff number	85044030
Country of origin	Germany

Technical data

Dimensions

Width	54 mm
Height	90 mm
Depth	61 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating : 2.5%/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)

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Ambient conditions

Noise immunity	EN 61000-6-2:2005
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Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC
	95 V DC ... 250 V DC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Inrush surge current	< 15 A (typical)
Power failure bypass	> 25 ms (120 V AC)
	> 150 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Choice of suitable fuses	6 A ... 16 A (Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC \pm 1 %
Setting range of the output voltage	22.5 V DC ... 29.5 V DC (> 24 V constant capacity)
Output current	1.75 A (-25°C ... 55°C)
	1.9 A (-25 °C ... 40 °C permanent)
	3.75 A (maximum output current)
Derating	55 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage \pm 10 %)
Residual ripple	< 60 mV _{PP} (20 MHz)
Peak switching voltages nominal load	< 40 mV _{PP} (20 MHz)
Maximum power dissipation NO-Load	< 0.7 W
Power loss nominal load max.	5 W

General

Net weight	0.19 kg
Operating voltage display	Green LED
Efficiency	> 89 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	3.75 kV AC (routine test)
Protection class	II (in closed control cabinet)
	> 1569000 h (40°C)
Mounting position	horizontal DIN rail NS 35, EN 60715

Power supply unit - STEP-PS/ 1AC/24DC/1.75 - 2868648

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General

Assembly instructions	Alignable: 0 mm horizontally, 30 mm vertically
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
Standard - Electrical safety	IEC 60950-1/VDE 0805 (SELV)
Shipbuilding approval	Germanischer Lloyd (EMC 1), ABS, NK
Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard – Safety extra-low voltage	IEC 60950-1 (SELV) and EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
	DIN VDE 0106-1010
Standard – Protection against electric shock	DIN 57100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	DIN VDE 0106-101
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Information technology equipment - safety (CB scheme)	CB Scheme
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950
	NEC Class 2 as per UL 1310
	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
Surge voltage category	III

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Stripping length	6.5 mm
Screw thread	M3

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
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Signaling

Output name	LED status indicator
Status display	"DC OK" LED green
Note on status display	U _{OUT} > 21.5 V: LED lights up

Classifications

eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27242213
eCl@ss 5.1	27242213
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002

ETIM

ETIM 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC002540
ETIM 5.0	EC002540

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

Approvals

Approvals

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UL Recognized / UL Listed / cUL Recognized / cUL Listed / GL / NK / BSH / IECEE CB Scheme / EAC / cULus Recognized / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Power supply unit - STEP-PS/ 1AC/24DC/1.75 - 2868648

Approvals

Approval details

UL Recognized 

UL Listed 

cUL Recognized 

cUL Listed 


GL

NK

BSH

IECEE CB Scheme 

EAC

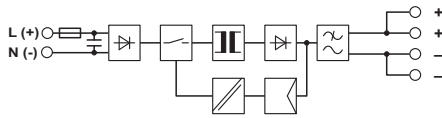
cULus Recognized 

cULus Listed 

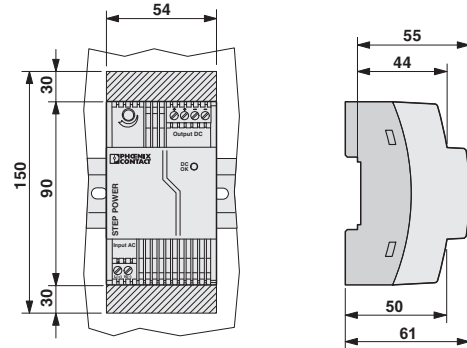
Drawings

Power supply unit - STEP-PS/ 1AC/24DC/1.75 - 2868648

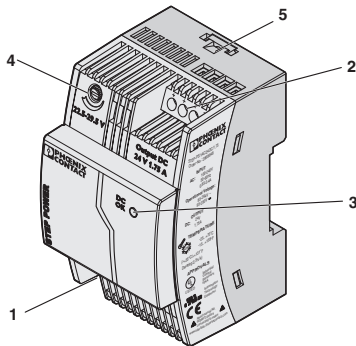
Block diagram



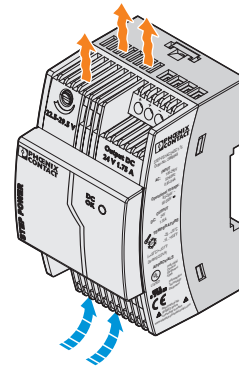
Dimensioned drawing



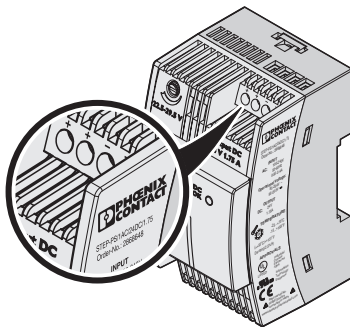
Schematic diagram



Schematic diagram



Schematic diagram



Schematic diagram

